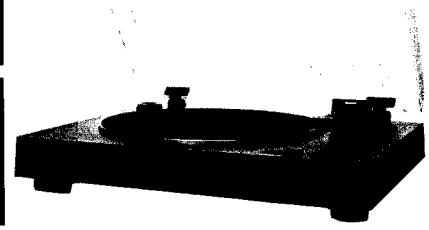
PIONEER®

Service Manual

CIRCUIT DESCRIPTIONS
REPAIR & ADJUSTMENTS



ORDER NO.
ARP-115-0

STEREO TURNTABLE

PL-130

MODEL PL-130 COMES IN FOUR VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Voltage	Remarks
WE	220V – 240V	Europe model
WB	220V – 240V	United kingdom model
WP	220V – 240V	Oceania model
R	110V – 120V/220V – 240V (Switchable)	General export model

- This is the service manual for model PL-130/WE, WB and WP. For servicing of the R type, please refer to the additional service manual (see page 15–16).
- Ce manuel d'instruction se refère au mode de réglage, en français.
- Este manual de servicio trata del método de ajuste escrito en español.

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS [USA] INC. 1925 E. Dominguez St., Long Beach, California 90810 U.S.A.
PIONEER ELECTRONIC [EUROPE] N.V. Luithagen-Haven 9, 2030 Antwerp, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia

FU© APR. 1982 Printed in Japan

1. SPECIFICATIONS

Motor and Turntable

Drive System ..... Belt-drive
Motor ..... DC motor
Turntable Platter ..... 280mm diam. aluminum alloy die-cast
Speeds ..... 33-1/3 and 45 rpm
Wow and Flutter ..... Less than 0.05% (WRMS)
Signal-to-Noise-Ratio ..... More than 68 dB (DIN-B)
(with Pioneer cartridge model PC-K65)

Tonearm

Type ..... Static-balance type, Straight pipe arm
Effective Arm Length ..... 190 mm
Overhang ..... 9.3 mm

Subfunctions

Auto-return mechanism, Free stop hinges

Miscellaneous

Power Requirements ..... AC 220 ~ 240 V, 50/60 Hz
Power Consumption 3W
Dimensions ..... 422 (W) x 108 (H) x 345 (D) mm
16-3/8 (W) x 4-1/4 (H) x 13-5/8 (D) in.
Weight ..... 3.5 kg/7.7 lb

PC-K65 Specifications

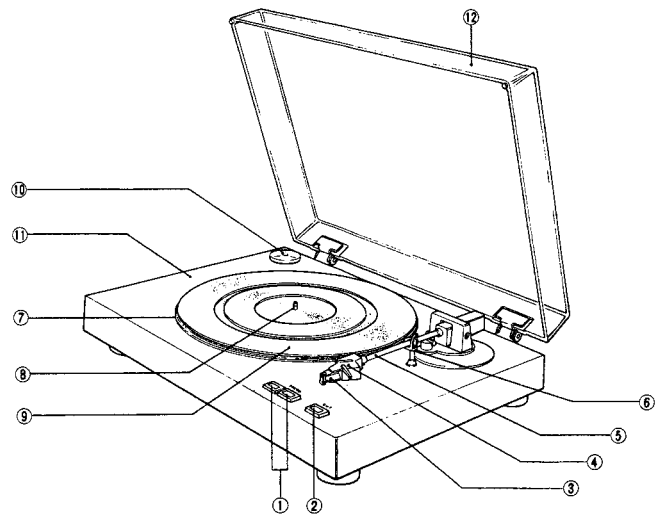
Type ..... Moving Magnet type
Stylus ..... 0.5 mil diamond (PN-K65)
Output Voltage ..... 3.5 mV
(1 kHz, 50 mm/s Peak velocity, LAT)
Tracking Force ..... 2.1 g to 2.9 g (proper 2.5 g)
Frequency Response ..... 20 ~ 20,000 Hz
Recommended Load ..... 47 kΩ
Weight ..... 3.4 g

Accessories

EP Adapter 1
Operating Instructions 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

2. FRONT PANEL FACILITIES



① **SPEED SWITCH**
Set this switch in accordance with the speed of the record which is to be played.
Depress "33" for playing 33-1/3 rpm records.
Depress "45" for playing 45 rpm records.

② **CUT SWITCH**
Depress this switch to stop play.

③ **CARTRIDGE (PC-K65)**

④ **HEADSHELL**

⑤ **TONEARM**

⑥ **ARM REST**
This serves to hold and clamp the tonearm. When moving the tonearm, release the clamp.

⑦ **PLATTER**

⑧ **PLATTER MOUNTING SHAFT**

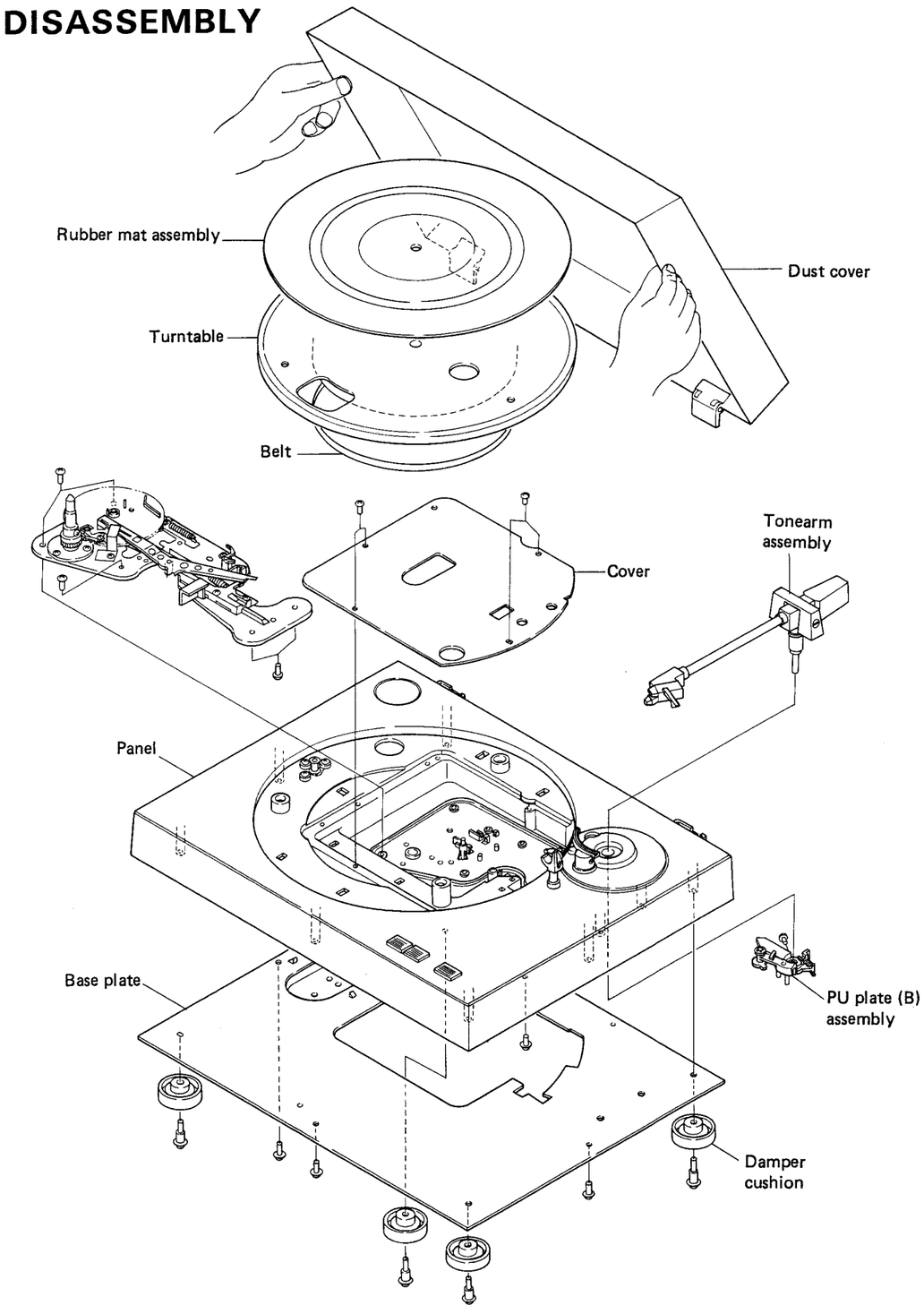
⑨ **RUBBER MAT**

⑩ **EP ADAPTER**
This is used when playing records without a "middle."

⑪ **CABINET**

⑫ **DUST COVER**

3. DISASSEMBLY



3.1 REMOVAL AND INSTALLATION OF DETECTOR LEVER UNIT

1. Hold the detector lever unit with your right hand as shown in Fig. 3-1, open the PU plate (A) and PU plate (B) of the PU plate (B) assembly with your left hand, and carefully pull out the detector lever unit upward.
2. Install the detector lever unit in reverse sequence of the removal. In this case, however, note that the detector lever unit will be bent when the pin portion (A) is in contact with the detector lever unit and the detector lever unit is pushed hard.

3.2 REMOVAL AND INSTALLATION OF PU PLATE (B) ASSEMBLY

1. Remove the base plate and remove the PU board plate.
2. Insert a slightly long screwdriver into the turntable through the opening on the back of the turntable as shown in Fig. 3-3, and remove the screw used to fix the PU plate (B) assembly.
3. Install the PU plate (B) assembly in reverse sequence of the removal. In this case, however, install the PU plate (B) assembly so that the mark on the panel is on the line extended from the side plane of the PU plate (B) (Fig.3-4).

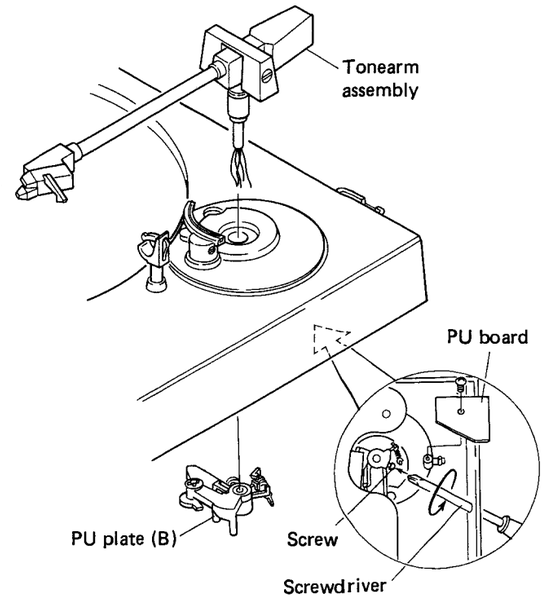


Fig. 3-3 Remove PU plate (B)

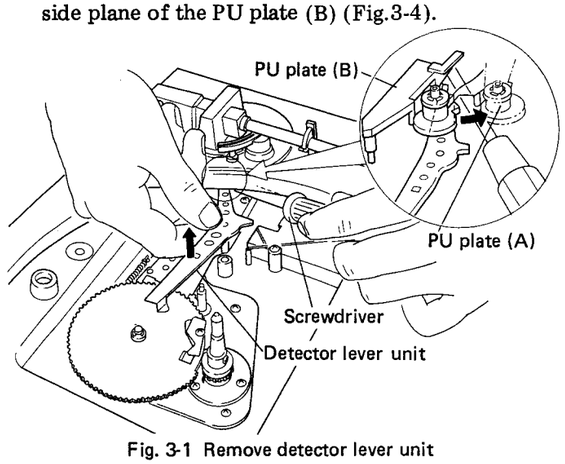


Fig. 3-1 Remove detector lever unit

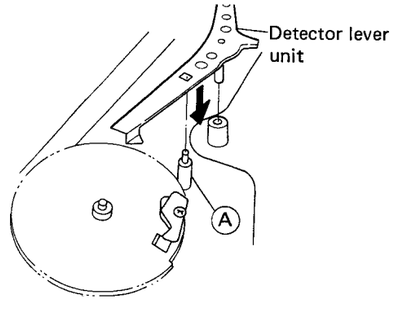


Fig. 3-2 Attach detector lever unit

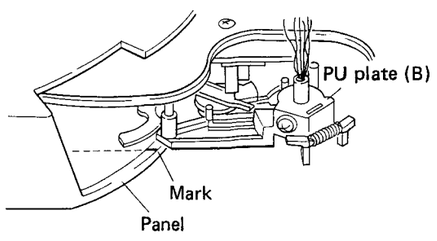


Fig. 3-4 Attach PU plate (B)

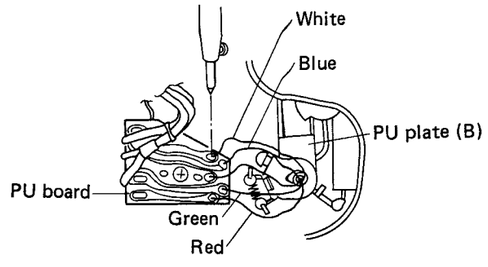
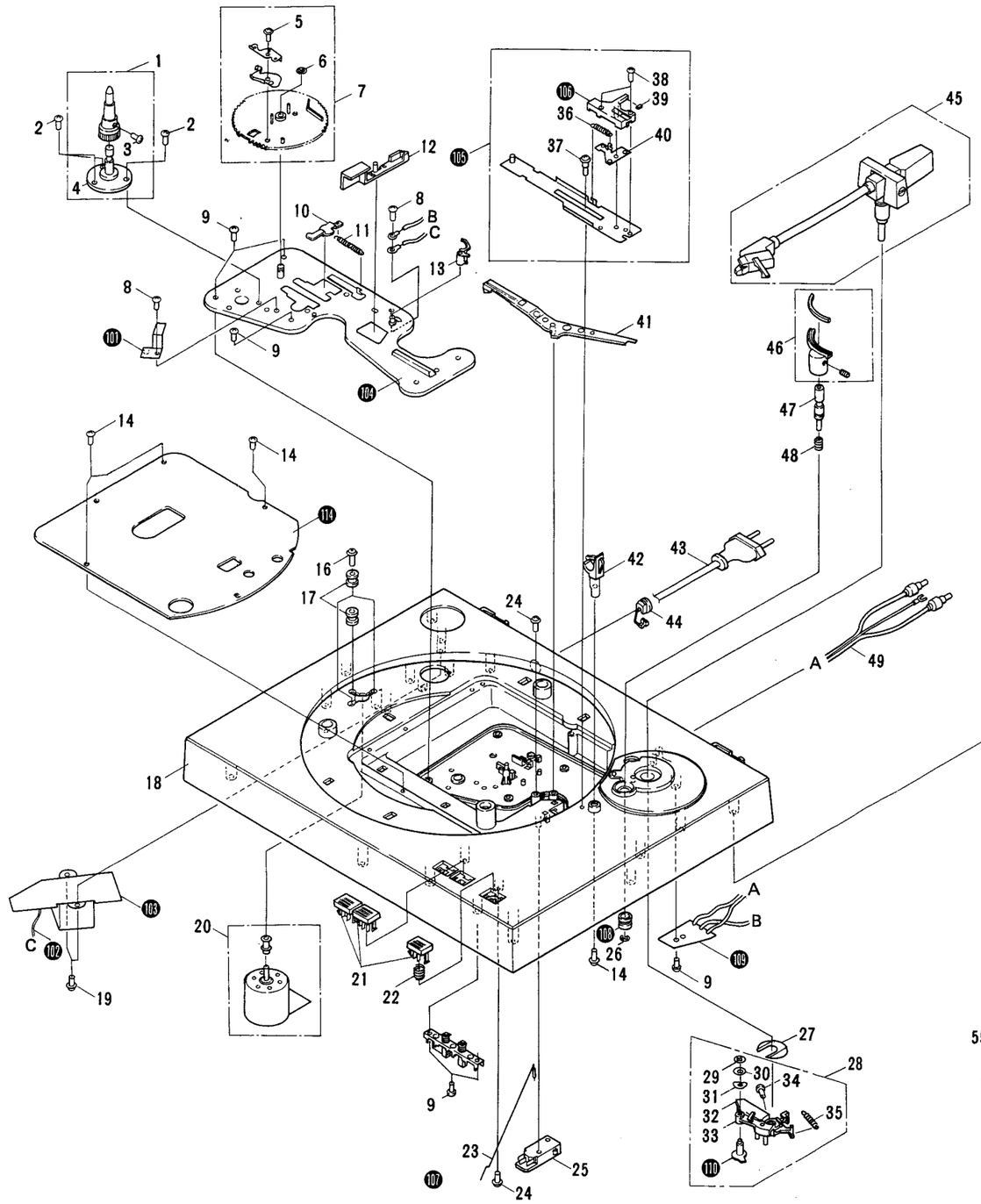
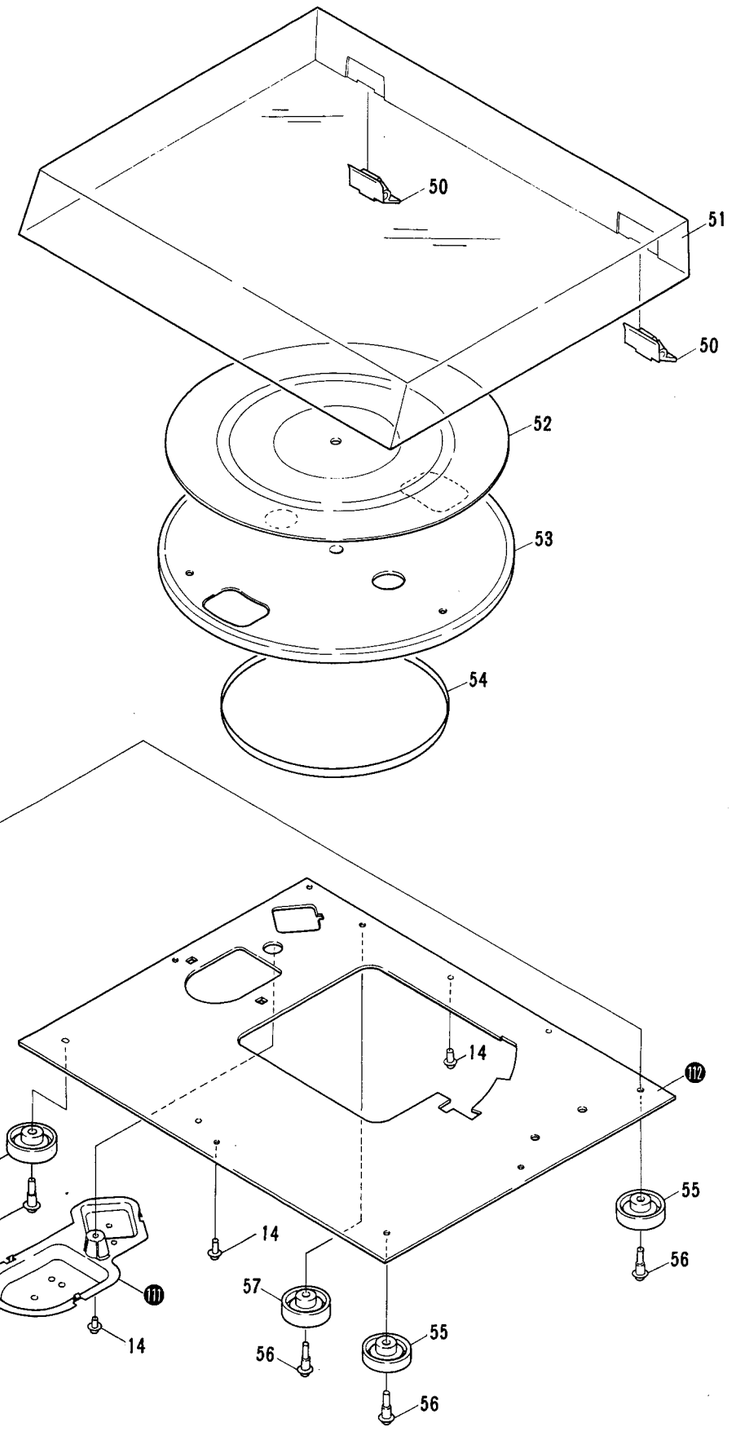


Fig. 3-5 Disconnect the tonearm lead wires

4. EXPLODED VIEWS

Exterior





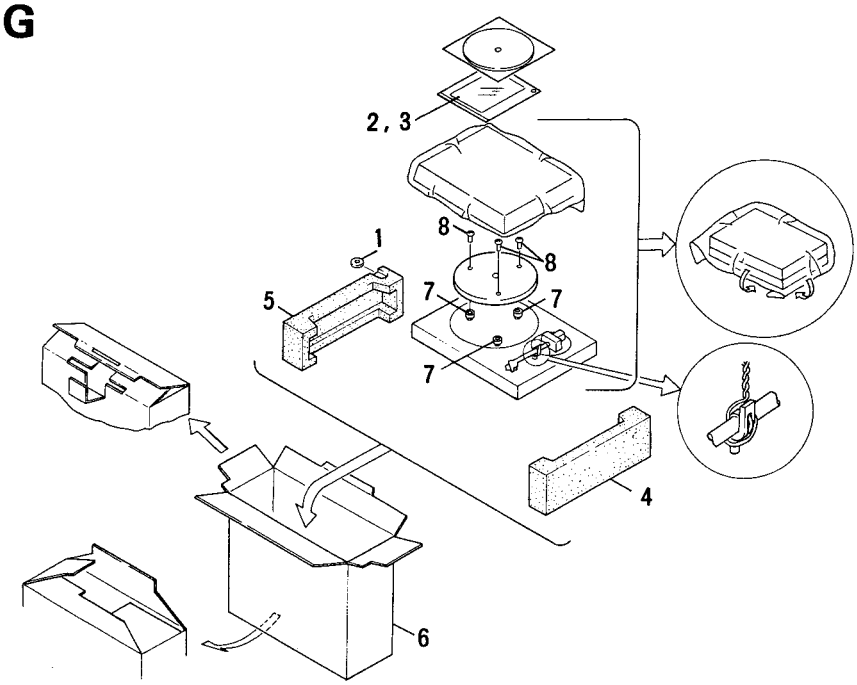
NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Parts List

Mark	No.	Part No.	Description
	1.	PXB-177	Shaft assembly
	2.	PDZ30P080FMC	Screw
	3.	PMZ30P040FMC	Screw
	4.	PXT-424	Shaft unit
	5.	PBA-126	Screw
	6.	YE40S	E-type washer
	7.	PYY-100	Cam assembly
	8.	PDZ30P050FMC	Screw
	9.	PPZ30P080FMC	Screw
	10.	PNX-035	Lock plate
	11.	PBH-225	Lock plate spring
	12.	PNX-465	Switch lever
	13.	PNX-031	Switch locker
	14.	IPZ30P100FMC	Screw
	15.		
	16.	PBA-112	Screw
	17.	PEB-172	Rubber bush
	18.	PNX-463	Panel
	19.	IPZ30P160FMC	Screw
★★	20.	PYY-113	Motor
	21.	PAC-118	Push button
	22.	PBH-340	Spring
	23.	PXB-283	Cut pole assembly
	24.	IPZ30P100FMC	Screw
★★	25.	PSF-020	Micro switch
	26.	YE70S	E-type washer
	27.	PBK-059	R spring washer
	28.	PXB-285	PU plate (B) assembly
	29.	YS40FBT	E-type washer
	30.	WC40FMC	Flat washer
	31.	PNC-227	PU spring washer
	32.	PNX-467	PU plate (A)
	33.	PNX-464	PU plate (B)
	34.	PMD40H080FMC	Screw
	35.	PBH-308	PU plate spring
	36.	PBH-224	Spring
	37.	PBA-145	Screw
	38.	PMZ26P100FMC	Screw
	39.	PEC-065	EV cam buffer
	40.	PNC-220	Start plate
	41.	PXT-496	Detector lever unit
	42.	PXB-192	Tonearm rest assembly
⚠	43.	PDG-037	Power cord (WE)
		PDG-038	Power cord (WB)
		PDG-039	Power cord (WP)
	44.	PEC-056	Strain relief
★	45.	PXB-284	Tonearm assembly
	46.	PXB-203	EV sheet assembly
	47.	PLB-089	Shaft
	48.	PBH-237	Spring
	49.	PDE-044	PU cord
★	50.	PXB-155	Hinge assembly
★	51.	PNV-034	Dust cover
	52.	PEA-061	Rubber mat assembly
	53.	PNR-177	Turntable platter
★★	54.	PEB-183	Belt
	55.	PEB-210	Damper cushion
	56.	PBA-143	Screw
	57.	PEB-223	Damper cushion
	58.		
	101.		Protector
	102.		GND lead unit
⚠	103.		Power supply assembly
	104.		Sub-panel unit
	105.		Driving plate assembly
	106.		EV cam
	107.		Cut pole
	108.		EV shaft holder
	109.		PU board plate
	110.		Index cam
	111.		Power transformer protector
	112.		Base plate
	113.		. . . . .
	114.		Cover

5. PACKING



Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1.	N93-603	45 adaptor		6.	PHH-006	Packing case
	2.	PRD-080	Operating instructions (WE)		7.	PNX-294	Turntable platter protector
	3.	PRB-216	Operating instructions (WB, WP)		8.	PBA-144	Screw
	4.	PHA-144	Protector				
	5.	PHA-145	Protector				

6. ELECTRICAL PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Miscellaneous Parts

Mark	Part No.	Symbol & Description
⚠	PWM-107	Circuit assembly
★★	PYY-113	Motor
★★	PSF-020	Microswitch

Circuit assembly (PWM-107) is composed of Power supply assembly, Switch assembly.

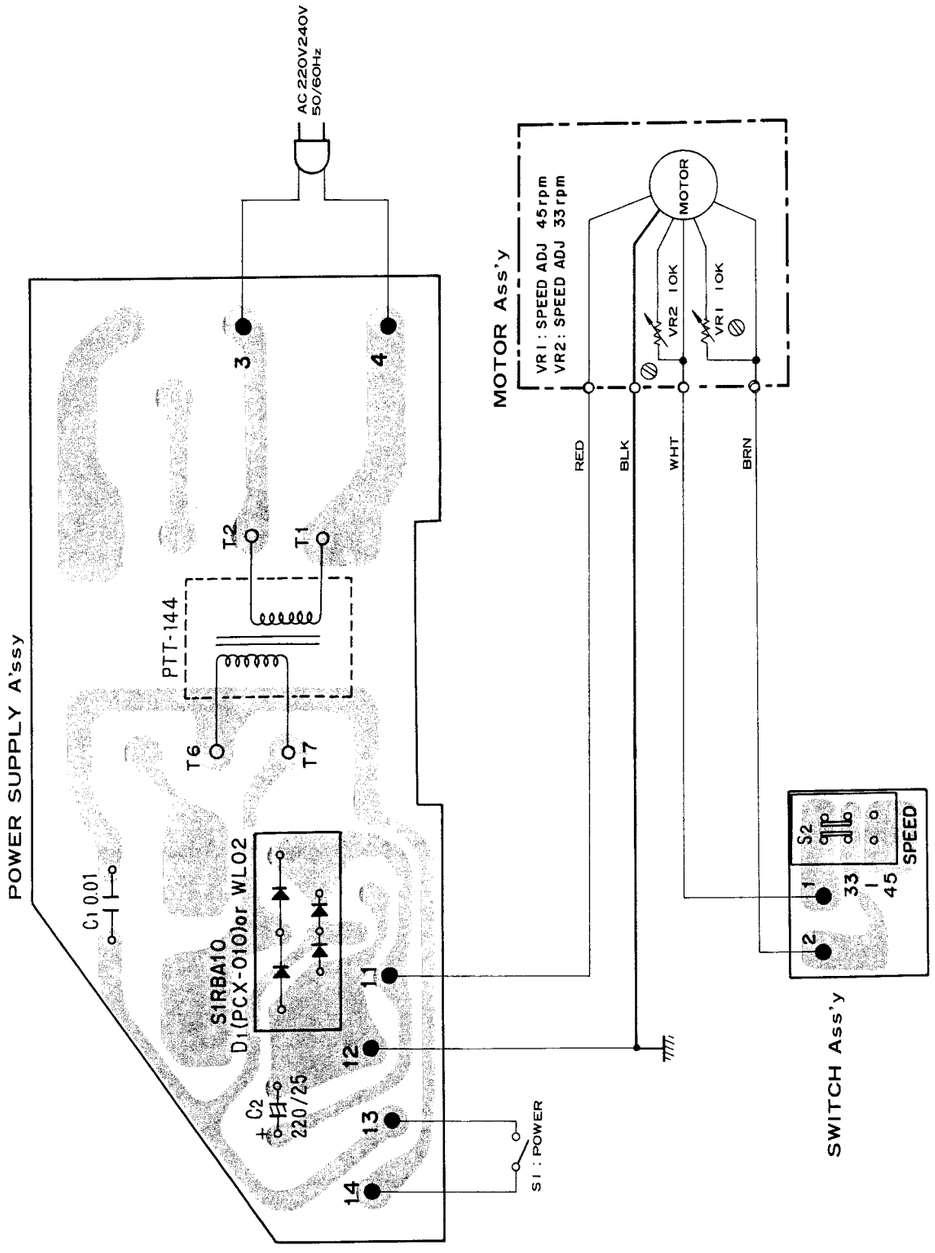
Power Supply Assembly

Mark	Part No.	Symbol & Description
	PCL-040	C1 Capacitor
	CEA221M25L	C2
★	PCX-010	D1 Bridge stack
⚠ ★	PTT-144	Power transformer (220–240V)

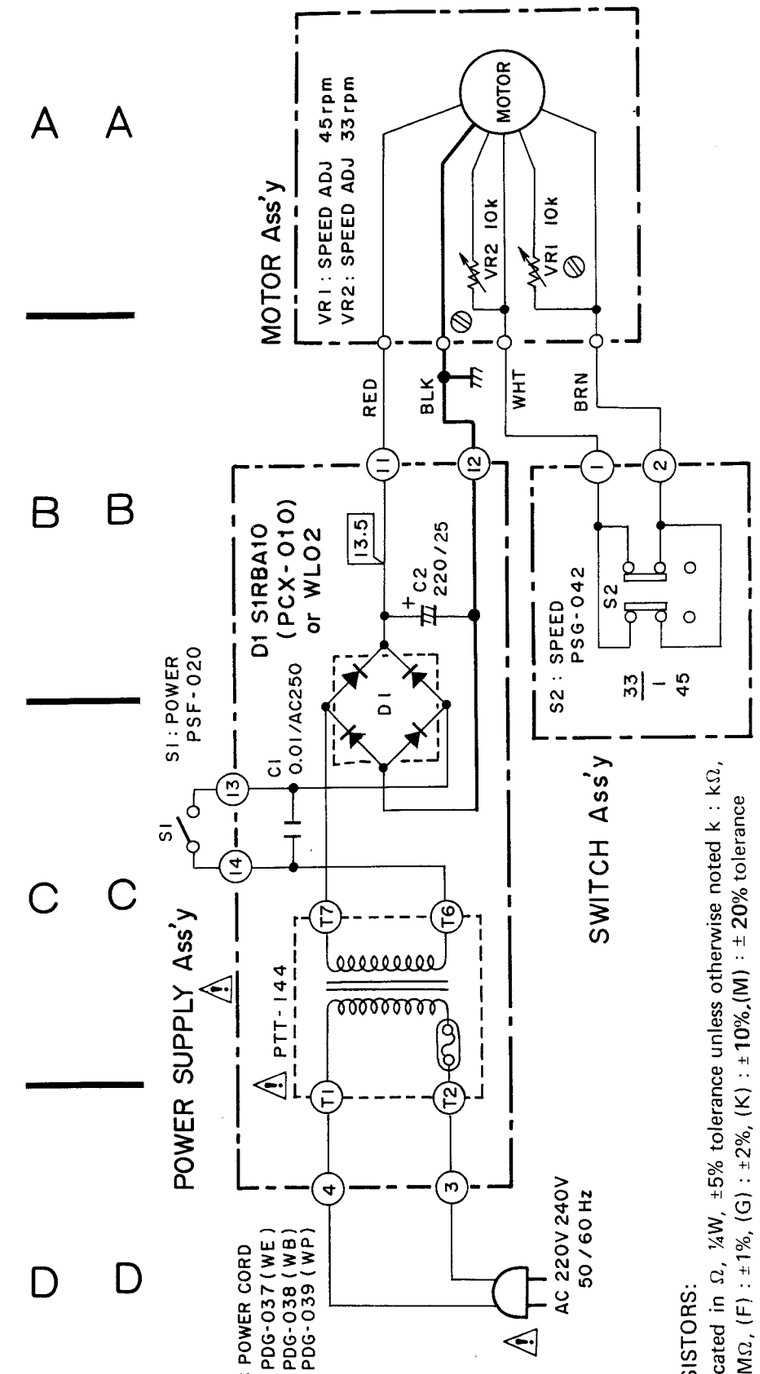
Switch Assembly

Mark	Part No.	Symbol & Description
★★	PSG-042	Push switch

7. P.C.BOARD CONNECTION DIAGRAM



8. SCHEMATIC DIAGRAM



SWITCHES:

S1 : POWER — ON — OFF

S2 : SPEED — 33 1/3 rpm — 45 rpm

The underlined indicates the switch position.

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

1. RESISTORS:
   Indicated in Ω, ¼W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10%,(M) : ±20% tolerance

2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
   Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE
   □ : DC voltage (V)

4. OTHERS:
   ⊘ : Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

9. ADJUSTMENTS

9.1 AUTO-RETURN

1. Insert a small flat-head screwdriver into the player through the opening as shown in Fig. 9-1, and turn the index cam counterclockwise until it stops.
2. Hold the tone arm with your hand and move it slowly toward the center spindle. When the needle point of the tone arm reaches at a position 45 to 35 mm from the center of the spindle, the tonearm will no longer move.
3. Insert the screwdriver once again into the player through the opening, turn the index cam clockwise slowly. The tonearm will move gradually to the center spindle. Adjust gap between the center spindle and needle point of the tonearm to about 32 mm.

Note; When this gap cannot be adjusted to 32 mm, the PU plate (B) assembly is not installed correctly. Reinstall the PU plate (B) assembly, and readjust this gap.

9.2 ARM-ELEVATION ADJUSTMENT

The height of the stylus tip from the record surface is 8 ± 0.3mm (Fig.9-2).

9.3 MOTOR ADJUSTMENT

1. Turn the power on and start the turntable platter rotating.
2. Adjust VR1 and VR2 in the motor assembly so that the stroboscope appears to be stationary. Again this adjustment is performed from below.
3. Adjust VR1 for 45 rpm speed, and VR2 for 33 rpm.
4. Always adjust at 33 rpm.

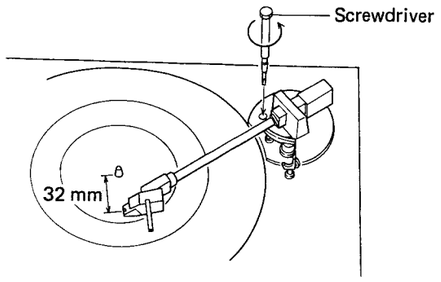


Fig. 9-1 Auto-return adjustment

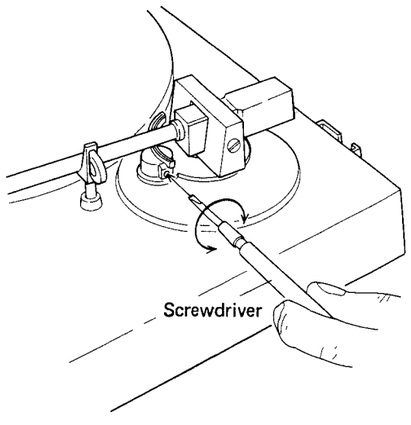


Fig. 9-2 Arm-elevation adjustment

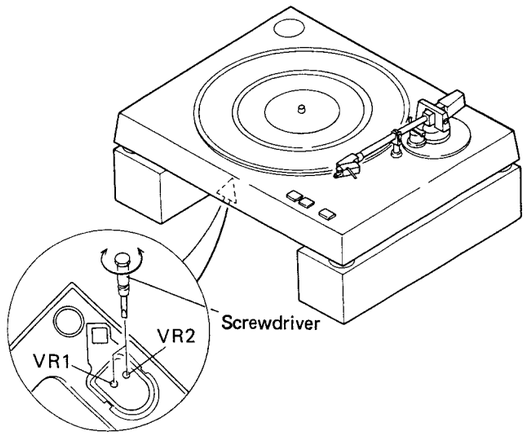


Fig. 9-3 Motor adjustment

9. RÉGLAGE

9.1 RETOUR AUTOMATIQUE

1. Insérer un petit tournevis plat dans l'ouverture du tourne-disques. (voir Fig. 9-1) Tourner la came vers la gauche jusqu'à l'arrêt.
2. Prendre le bras de pick-up et le déplacer lentement vers le pivot central. Lorsque l'aiguille du bras de pick-up atteint une position entre 45 et 35mm du pivot central, le bras ne bougera plus.
3. Insérer à nouveau le tournevis dans l'ouverture et tourner lentement la came vers la droite. Le bras de pick-up se déplacera lentement vers le centre. Régler la position de l'aiguille du bras de pick-up à une distance de 32mm du pivot central.

Remarque:
Si la distance ne peut pas être réglée à 32mm, c'est que la plaque du bras de pick-up (B) n'est pas en position correcte. Réinstaller la plaque de l'ensemble de bras de pick-up, et refaire le réglage de la distance.

9.2 RÉGLAGE DE L'ÉLÉVATION DU BRAS

Le bout de l'aiguille doit se trouver à une hauteur de 8±0,3mm au-dessus du disque (Fig. 9-2).

9.3 RÉGLAGE DU MOTEUR

1. Brancher le courant et faire tourner la platine.
2. Régler VR1 et VR2 dans l'ensemble du moteur pour que le stroboscope paraisse stationnaire. De nouveau, ce réglage se fait par dessous.
3. Le réglage de 45 tpm se fait sur VR1; le réglage de 33 tpm se fait sur VR2.
4. Toujours régler sur 33 tpm.

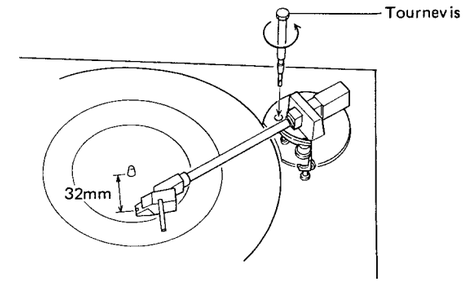


Fig. 9-1 Réglage de retour automatique

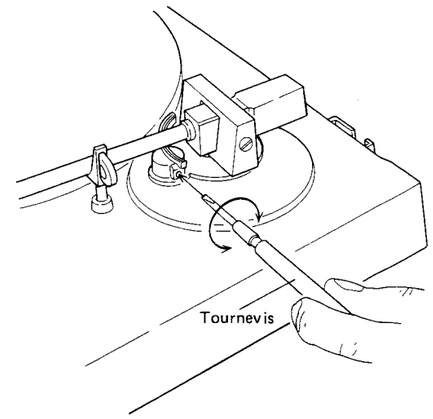


Fig. 9-2 Réglage de la hauteur du bras de pick-up

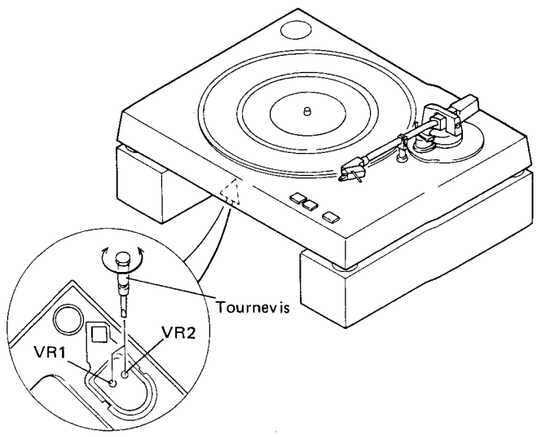


Fig. 9-3 Réglage du moteur

9. AJUSTE

9.1 RETORNO AUTOMÁTICO

1. Insertar un destornillador pequeño de cabeza plana en el reproductor a través de la abertura tal y como se muestra en la figura 9-1, y girar la leva de referencia hacia la izquierda hasta que se detenga.
2. Sostener el brazo fonocaptor con la mano y moverlo lentamente hacia el pivote central. Cuando la punta de la aguja en el brazo fonocaptor llegue a la posición de 45 a 35mm desde el centro del pivote, el brazo fonocaptor dejará de moverse.
3. Insertar de nuevo el destornillador en el reproductor a través de la abertura, girar la leva de referencia lentamente hacia la derecha. El brazo fonocaptor se moverá gradualmente hacia el pivote central. Ajustar el huelgo entre el pivote central y la punta de la aguja del brazo fonocaptor a unos 32mm.

NOTA;
Cuando este huelgo no pueda ajustarse a 32mm, significa que el ensamble de la placa PU (B) no está correctamente instalado. Volver a instalar el ensamble de la placa PU (B) y reajustar el huelgo.

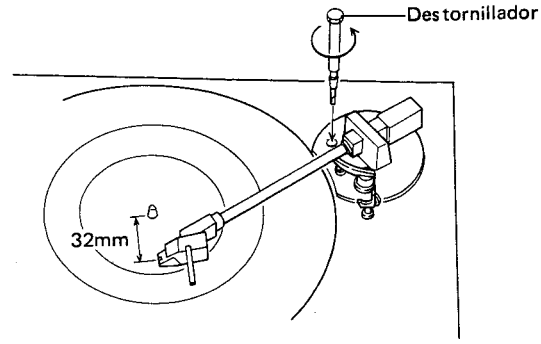


Fig. 9-1 Ajuste del retorno automático

9.2 AJUSTE DE LA ELEVACIÓN DEL BRAZO

La altura de la punta de la aguja a la superficie del disco es de 8±0,3mm(Fig. 9-2).

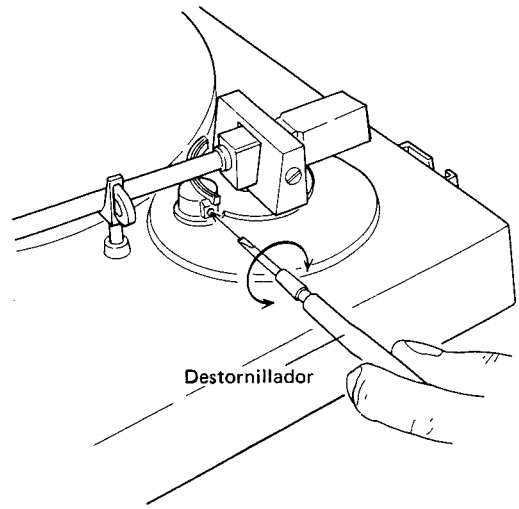


Fig. 9-2 Ajuste de la elevación del brazo

9.3 AJUSTE DEL MOTOR

1. Conectar la alimentación e iniciar la rotación del plato del giradiscos.
2. Ajustar los VR1 y VR2 del ensamble del motor de modo que el estroboscopio parezca estár estático. Este ajuste se efectúa de nuevo desde debajo.
3. Ajustar el VR1 para la velocidad de 45 rpm, y VR2 para la de 33 rpm.
4. Ajustar siempre a 33 rpm.

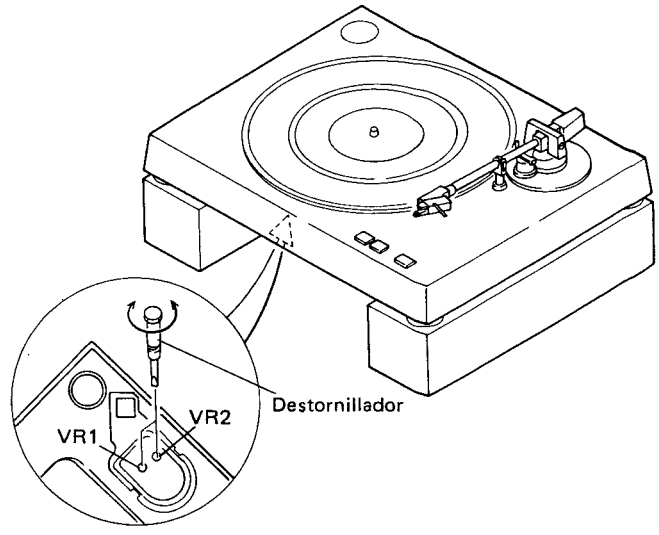


Fig. 9-3 Ajuste del motor

ADDITIONAL

Service Manual

PIONEER®

STEREO TURNTABLE

PL-130 R

1. SPECIFICATIONS

Motor and Turntable

Drive System ..... Belt-drive
Motor ..... DC motor
Turntable Platter ..... 280mm diam. aluminum alloy die-cast
Speeds ..... 33-1/3 and 45 rpm
Wow and Flutter ..... Less than 0.05% (WRMS)
Signal-to-Noise-Ratio ..... More than 68 dB (DIN-B)
(with Pioneer cartridge model PC-K65)

Tonearm

Type ..... Static-balance type, Straight pipe arm
Effective Arm Length ..... 190 mm
Overhang ..... 9.3 mm

Subfunctions

Auto-return mechanism, Free stop hinges

Miscellaneous

Power Requirements ..... AC110-120/220-240V ~
(switchable), 50, 60Hz
Power Consumption 3W
Dimensions ..... 422 (W) x 108 (H) x 345 (D) mm
16-3/8 (W) x 4-1/4 (H) x 13-5/8 (D) in.
Weight ..... 3.5 kg/7.7 lb

PC-K65 Specifications

Type ..... Moving Magnet type
Stylus ..... 0.5 mil diamond (PN-K65)
Output Voltage ..... 3.5 mV
(1 kHz, 50 mm/s Peak velocity, LAT)
Tracking Force ..... 2.1 g to 2.9 g (proper 2.5 g)
Frequency Response ..... 20 ~ 20,000 Hz
Recommended Load ..... 47 kΩ
Weight ..... 3.4 g

Accessories

EP Adapter 1
Operating Instructions 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

2. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Mark	Symbol & Description	Parts No.		Remarks
		WE type	R type	
	Panel	PNX-463	PNX-469	
⚠	Circuit assembly	PWM-107	PWM-109	
⚠	Power cord	PDG-037	PDG-028	
	Operating instructions	PRD-080	PRB-216	
⚠ ★★	Line voltage selector	. . . . .	PSB-011	

3. POWER SUPPLY ASSEMBLY

Mark	Part No.	Symbol & Description	
	PCL-040	C1	Capacitor
	CEA 221M 25L	C2	
★	PCX-010	D1	Bridge stack
⚠ ★	PTT-126		Power transformer (110V–120V/220V–240V)

POWER SUPPLY CIRCUIT FOR R TYPE